

CLAIMS:

1. A liquid crystal display device comprising:

a liquid crystal display medium including a pair of first and second polarizing plates; and a liquid crystal layer between the first and second polarizing plates, and

polarization selective reflection means, provided on a side of the first polarizing plate so as to face the liquid crystal display medium, for transmitting a light component in a first polarization status of light incident on a first surface opposite to a second surface on a side of the liquid crystal display medium, and for reflecting a light component in a second polarization status of the light incident on the first surface, the second polarization status being different from the first polarization status.

2. A liquid crystal display device comprising:

a liquid crystal display medium including a pair of first and second polarizing plates; and a liquid crystal layer between the first and second polarizing plates;

polarization selective reflection means, provided on a side of the first polarizing plate so as to face the liquid crystal display medium, for transmitting a light component in a first polarization status of light incident on a first surface opposite to a second surface on a side of the liquid crystal display medium, and for reflecting a

light component in a second polarization status of the light incident on the first surface, the second polarization status being different from the first polarization status; and

light irradiating means, provided between the polarization selective reflection means and the liquid crystal display medium, for irradiating the liquid crystal display medium with light from a light source.

3. A liquid crystal display device comprising:

a liquid crystal display medium including a pair of first and second polarizing plates; and a liquid crystal layer between the first and second polarizing plates;

polarization selective reflection means, provided on a side of the first polarizing plate so as to face the liquid crystal display medium, for transmitting a light component in a first polarization status of light incident on a first surface opposite to a second surface on a side of the liquid crystal display medium, and for reflecting a light component in a second polarization status of the light incident on the first surface, the second polarization status being different from the first polarization status;

light irradiating means, provided between the polarization selective reflection means and the liquid crystal display medium, for irradiating the liquid crystal

display medium with light from a light source; and

polarization control means, provided between the polarization selective reflection means and the liquid crystal display medium, for controlling a polarization status of light travelling from the polarization selective reflection means towards the liquid crystal display medium.

4. The liquid crystal display device as set forth in claim 2 or 3, further comprising an enclosure which covers an outer surface of the liquid crystal display device, the enclosure including: a display window on a surface on a side of the liquid crystal display medium of the enclosure; and a light inlet window on a surface on a side of the polarization selective reflection means of the enclosure.

5. The liquid crystal display device as set forth in claim 3, wherein

the polarization control means is a polarization controlling liquid crystal medium in which the polarization status of the light is controlled in accordance with an alignment status of liquid crystal molecules in the liquid crystal layer.

6. The liquid crystal display device as set forth in any one of claims 1 through 3, wherein

the polarization selective reflection means transmits first linearly polarized light of light incident on the first surface opposite to the second surface on the side of the liquid crystal display medium, and reflects second linearly polarized light which is perpendicular to the first linearly polarized light.

7. The liquid crystal display device as set forth in any one of claims 1 through 3, wherein

the polarization selective reflection means transmits first circularly polarized light of light incident on the first surface opposite to the second surface on the side of the liquid crystal display medium, and reflects a second circularly polarized light whose rotative direction is opposite to that of the first circularly polarized light,

said device further comprising a retardation plate for converting the first circularly polarized light, which has been transmitted through the polarization selective reflection means, into linearly polarized light.

8. The liquid crystal display device as set forth in claim 5, wherein

the liquid crystal layer of the polarization controlling

liquid crystal medium is a twist nematic liquid crystal layer.

9. The liquid crystal display device as set forth in claim 5,

the liquid crystal layer of the polarization controlling liquid crystal medium is a parallel-aligned nematic liquid crystal layer.

10. The liquid crystal display device as set forth in claim 4, further comprising

light refracting means, provided on the light inlet window of the enclosure, for refracting incident light which is slanted with respect to a direction perpendicular to a back surface of the liquid crystal display medium so that the incident light travels in a direction towards a front surface.